

09/831575

08 Rec'd PCT/PTO

11 MAY 2007

AMENDED CLAIMS

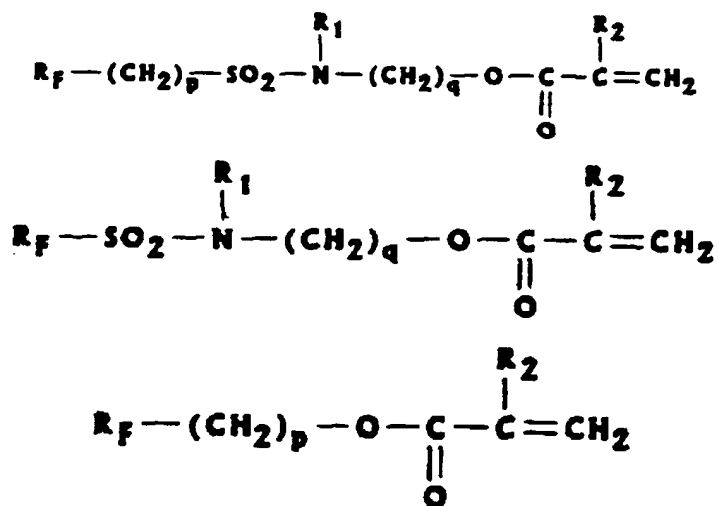
CLAIMS

1. (Amended) Process for producing
fluorinated polymers by miniemulsion polymerization in
5 two stages comprising
- a) emulsification of a mixture of monomers
comprising:
- from 20 to 99.9% by weight of at least one
monomer selected from fluorinated (meth)acrylic
10 monomers (A),
- from 0.1 to 15% by weight of at least one
monomer selected from acrylamide and its compounds,
including N-methylolacrylamide, and
- from 0 to 65% by weight of at least one
15 monomer selected from nonfluorinated acrylic or vinyl
monomers (B),
- using energetic emulsifying treatment,
including ultrasound, colloid mill or high-pressure
homogenizer, and
- 20 b) polymerization of the said mixture at a
temperature ranging from 20 to 100°C using radical
initiators,
- the level of organic cosolvent being less
than 0.2% by weight of the total weight of the
25 emulsion.
2. (Amended) Process according to Claim 1,
wherein the mixture of monomers is stabilized by at
least one surfactant selected from the group comprising
nonionic, anionic or cationic surfactants, including

09/831575-081401

polyethoxylated sulphosuccinate compounds or quaternary ammonium compounds.

3. (Amended) Process according to Claim 1, wherein the fluorinated monomer A is selected from the group comprising the monomers corresponding to the following formulae:



10

in which R_F represents a perfluorinated radical with a linear or branched chain comprising 2 to 20 carbon atoms, p and q , which are identical or different, each represent an integer ranging from 1 to 20, R_1 represents a linear or branched alkyl radical comprising from 1 to 4 carbon atoms and R_2 represents a hydrogen atom or a methyl radical.

4. (Amended) Process according to claim 1, wherein the monomer B is selected from the group comprising:

- C_1 - C_{22} alkyl (meth)acrylates
- (meth)acrylates, the radical of which carries an oxyethylenated linkage

- vinyl monomers, including vinyl chloride or vinyl acetate

- acrylic and methacrylic acids.

5. (Amended) Process according to claim 1,
5 wherein the initiator is selected from the group comprising:

- peroxides

- persalts, including persulphates

- azo compounds, such as 4,4'-azobis

10 (4-cyanopentanoic acid).

6. (Amended) Aqueous dispersion comprising fluorinated polymers obtained according to the process of claim 1, the content of organic cosolvent of which is less than 0.2% by weight of the total weight of the
15 emulsion and the level of coagulum being less than 1% by weight of the total weight of monomers.

7. (Amended) Hydrophobic and oleophobic treatment of substrates comprising treatment of, leather, textiles, fitted carpets, paper and
20 construction materials with an aqueous dispersion of the polymer of claim 6.

8. (New) Process according to claim 3,
wherein the integer is from 1 to 4.

A¹ 0001575 001401 00180" 525 FEB 60

A²